

Date: Wednesday, 19/11/2008 10:09:31 AM
 User: Julie Dawson

Process Sheet

Customer	CU-DAR001 Dart Helicopters Services			Drawing Name	BUBBLE WINDOW, RH		
Job Number	43547			Part Number	D32692		
Estimate Number	11394			Drawing Number	D3269		
P.O. Number	:			Project Number	N/A		
This Issue	19/11/2008 S.O. No. :			Drawing Revision	D/B		
Prsht Rev.	NC			Material	:		
First Issue	/ / Type : THERMOFORMING			Due Date	26/11/2008 Qty: 2 Um: Each		
Previous Run	43546						
Written By	<u>JUL 08.11.19</u>						
Checked & Approved By							
Comment	Est. A 05.03.22 New issue KJ/JLM Est B 05.05.09 Added engraving EC Est Rev:06-07-03 As per Rev C JLM Est C 07.11.06 Thermoform in-house DL verified by:EC Est. Rev: D 08.07.24 As per New Tool DL.						

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	HAND FINISH TH	HAND FINISHING THERMOFORMING
	Comment: HAND FINISHING THERMOFORMING	
	Set up Clamping Frame and Load Program as per Folio FTA 014	
2.0	MACRYLICS177	0.177" PLEXIGLAS G CLEAR CAST ACRYLIC SH
	Comment: Qty.: 10.0000 sf(s)/Unit Total : 20.0000 sf(s) 0.177" PLEXIGLAS G CLEAR CAST ACRYLIC SH	
	1) Batch # M 108784	
3.0	HAND FINISH TH	HAND FINISHING THERMOFORMING
	Comment: HAND FINISHING THERMOFORMING	
	1) Cut Blanks to 30" by 48"	
4.0	THERMOFORMING	THERMOFORMING MACHINE
	Comment: THERMOFORMING MACHINE	
	Thermoform as per Dwg. D3269 and Folio FTA 014	
	Dwg. Rev. <u>B</u> Folio Rev. <u>C</u>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 19/11/2008 10:09:31 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services		Drawing Name: BUBBLE WINDOW, RH
Job Number: 43547		Part Number: D32692
Job Number:		
Seq. #:	Machine Or Operation:	Description :
5.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
Comment: INSPECT PARTS AS THEY COME OFF MACHINE		
<ol style="list-style-type: none">1) Check Surface finish for undesired marks, voids, dimples etc.2) Check depth of bubble to ensure conformity to drawing tolerances. <p>BB 08/11/27 X2</p>		
6.0	QC8	SECOND CHECK
Comment: SECOND CHECK <p>BB 08/11/27 X2</p>		
7.0	HAND FINISH TH	HAND FINISHING THERMOFORMING
Comment: HAND FINISHING THERMOFORMING		
<ol style="list-style-type: none">1) Trim off excess flange material2) Buff out any light scratches or blemishes3) Etch part number and batch number <p>BB 08/11/27 X2</p>		
8.0	QC5	INSPECT WORK TO CURRENT STEP
Comment: INSPECT WORK TO CURRENT STEP <p>Sosulaz X2</p>		
<ol style="list-style-type: none">1) Visually inspect for clarity, and proper formation. <p>BB 08/11/27 X2</p>		
9.0	PACKAGING 1	PACKAGING RESOURCE #1
Comment: PACKAGING RESOURCE #1 <p>BB 08/11/27 X2</p>		
10.0	QC21	FINAL INSPECTION/W/O RELEASE
Comment: FINAL INSPECTION/W/O RELEASE <p>BB 08/11/28 AJ</p>		
Job Completion		
<p>MF 08-11-27</p>		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>QP</i>	DRAWN BY <i>LE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>IP</i>	APPROVED <i>H</i>	DRAWING NO. DSI 9329	REV. B SHEET 1 OF 1
DATE 06.06.26		TITLE BUBBLE WINDOW INSTALL MOD.	SCALE NTS
A	06.04.25	NEW ISSUE	
B	06.06.26	CHG TO EFFECTIVE AFTER CHG 002	

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D044-713 REV. A

REF. CANADIAN STC: SH05-13 ISSUE 1

REF. FAA STC: SR02088NY

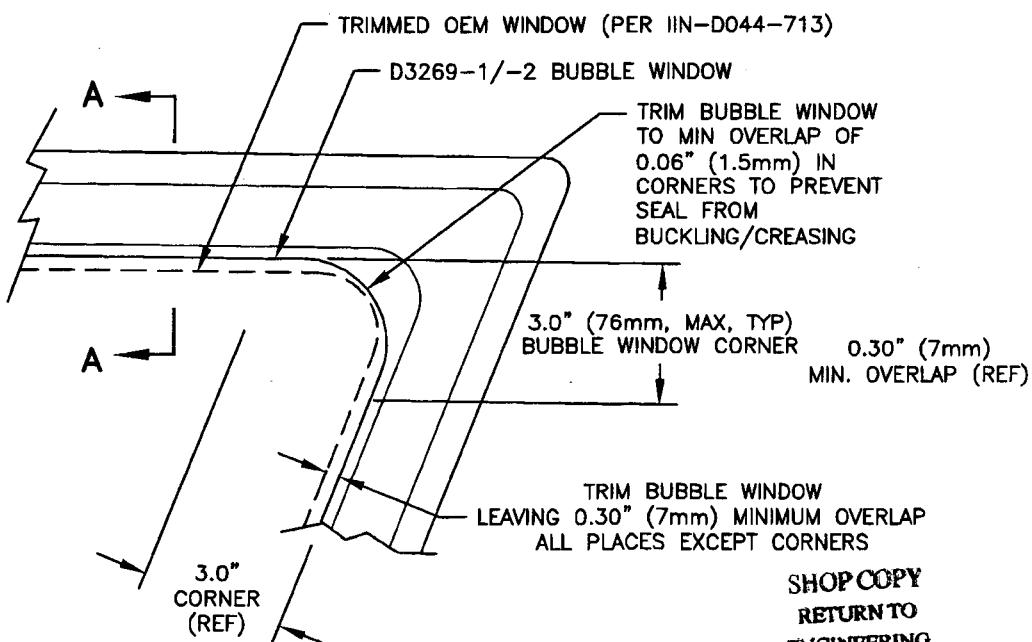
PURPOSE: For the D044-713-013/-014 kits supplied after CHG 002, the D3267-1/-2 bubble windows have been supplied untrimmed to allow for easier installation in the field. The installer must trim the windows in accordance with these instructions prior to installation.

PROCEDURE:

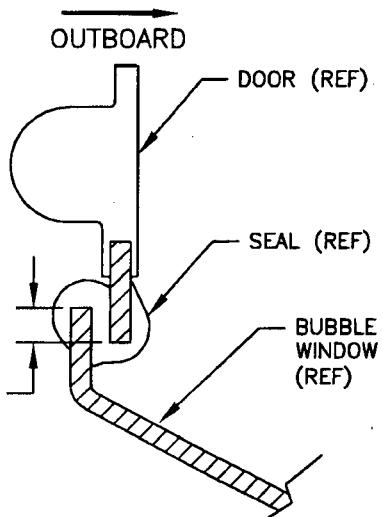
- 1) Modify the R44 crew door per items 3.2.1 and 3.2.2 of Installation Instructions IIN-D044-713 Rev.A.
- 2) Fit and trim the D3269-1/-2 Bubble Window to match the cutout in the door as follows: The bubble window must be a minimum of 0.30" (7mm) larger than the cutout in the OEM window as shown in the figure below. However, in the corners of the window, it is acceptable to trim a 0.06" minimum overlap (1.5mm) to help prevent the D2126-0903 Seal from buckling/creasing in the corners. The edge of the bubble window must be deburred to a smooth finish.
- 3) Continue installing the bubble window per items 3.2.3 through 3.2.5 of the installation instructions.

FIGURE 1

LOOKING AT INSIDE CORNER OF DOOR

**SECTION A-A**

(NOT TO SCALE)



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 115541

CANADA DEPARTMENT OF TRANSPORT AIRCRAFT CERTIFICATION BRANCH DAO # 01-O-01	
APPROVED <i>[Signature]</i>	
BY:	D. SHEPHERD (DE # 02)
DATE:	06.06.26
CERT. NO.:	SH05-13
ISSUE NO.:	1

Copyright © 2006 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

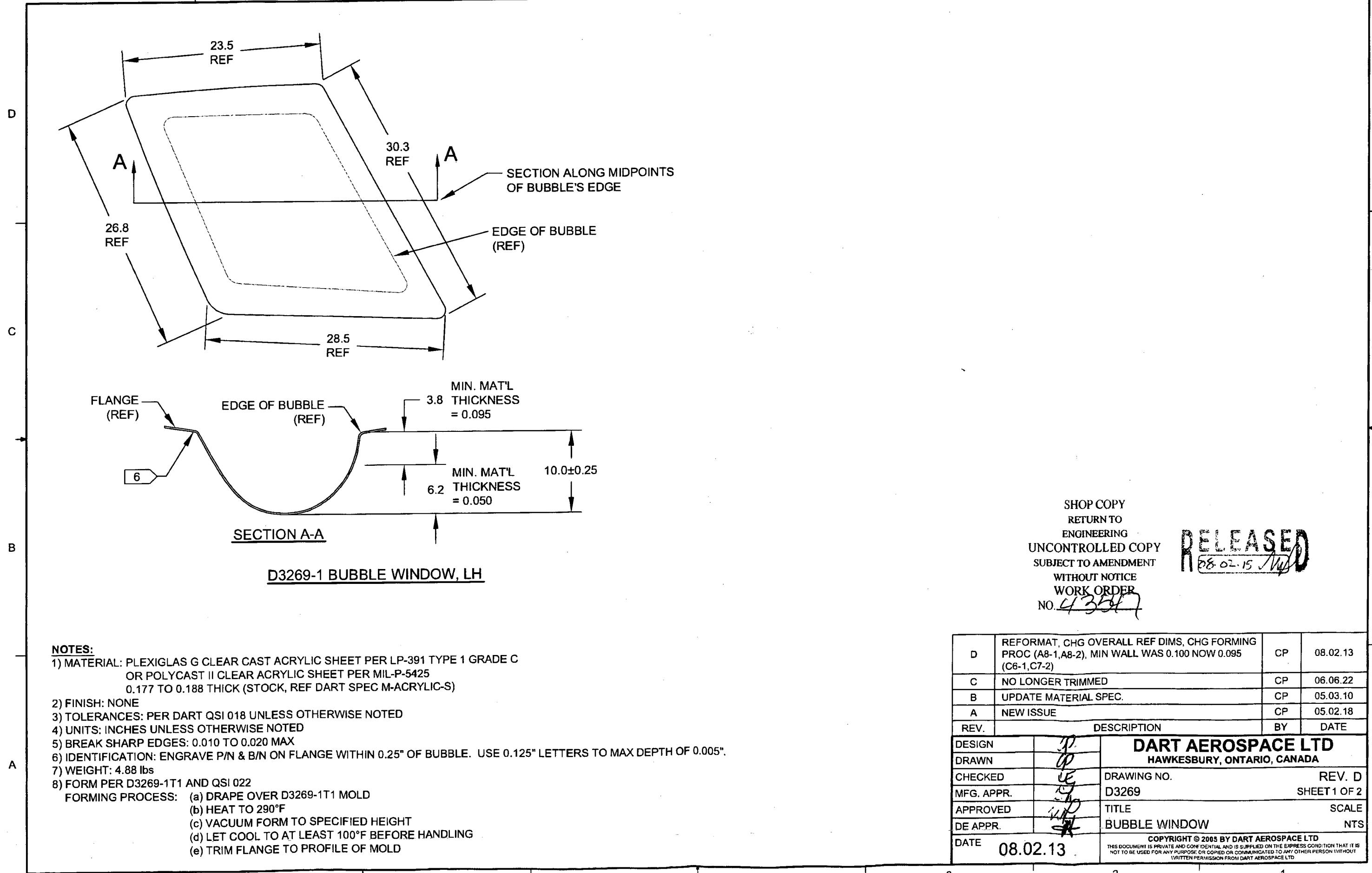
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

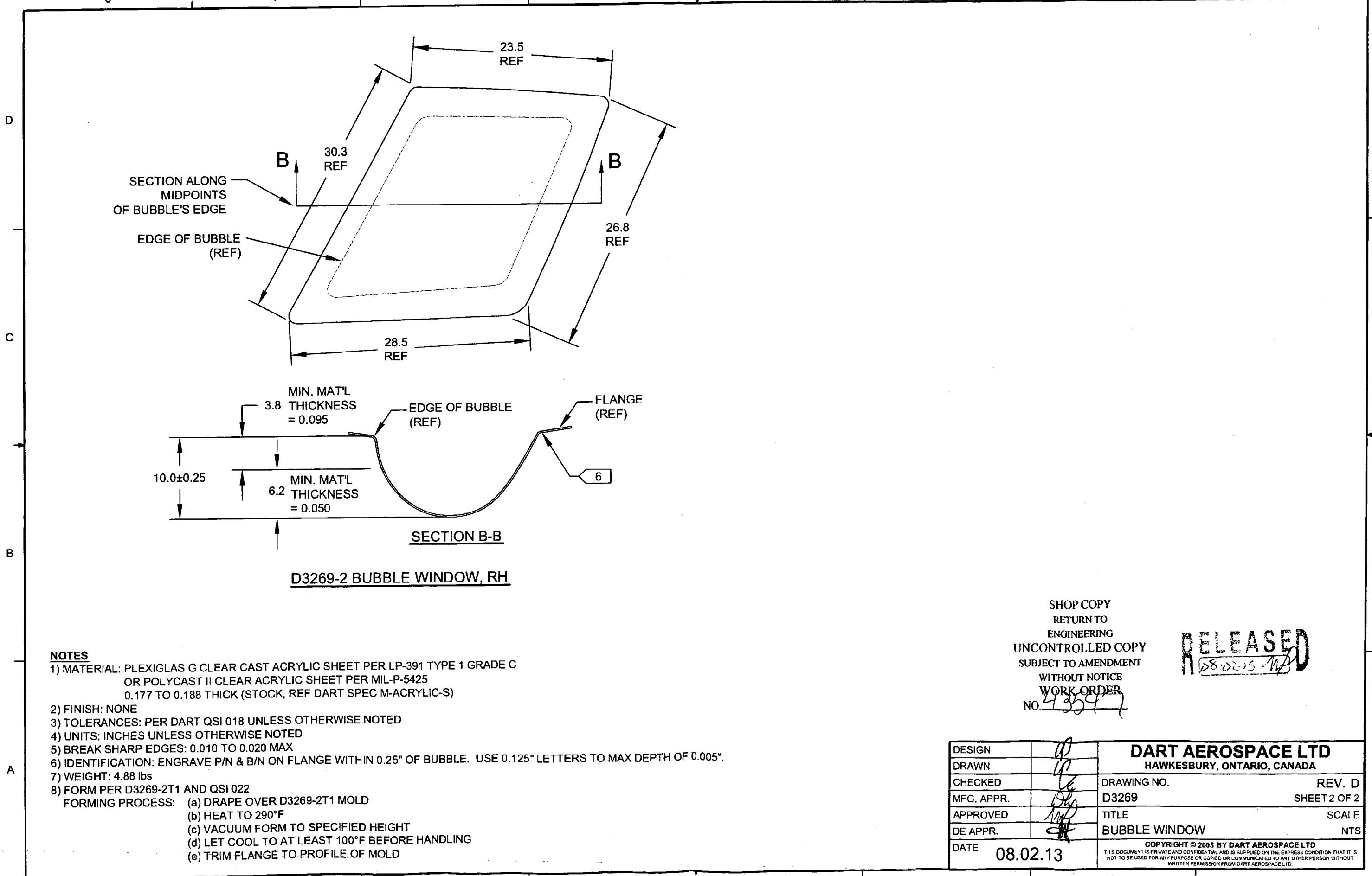
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1





DART AEROSPACE LTD	WORK ORDER:	43547
Description: R 44 Bubble Window RH	Part Number:	D3269-2
Inspection Dwg: D3269 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

(Step 4) Thermoforming Visual Inspection Sign-off

Description	Initials
Depth of bubble within tolerances	<i>SLB</i>
Acceptable shape definition	<i>JL</i>
Free of visual flaws (bumps, cracks, voids, etc.)	<i>DL</i>

(Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing D3464 Rev. 0 and record below

Measured by:	D.L.	Audited by:		Prototype Approval:	N
Date:	08/11/16	Date:	08/11/16	Date:	PA

Rev	Date	Change	Revised by	Approved
		New Issue		

#2

DART AEROSPACE LTD	WORK ORDER:	43547
Description: R 44 Bubble Window RH	Part Number:	D3269-2
Inspection Dwg: D3269 Rev: D		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

(Step 4) Thermoforming Visual Inspection Sign-off

Description	Initials
Depth of bubble within tolerances	WG
Acceptable shape definition	WGH
Free of visual flaws (bumps, cracks, voids, etc.)	12th

(Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing D3269 Rev. D and record below

Drawing	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Dimension		Dimension				
depth of bubble 10"	+/- 0.25"	10"	✓			
23.5	REF +/-.100	23.5"	✓			
26.8	REF +/-.100	26.5"	✓			
28.5	REF +/-.100	28.4"	✓			
30.3	REF +/-.100	30.3"	✓			
top 6.2" of bubble	0.050" Min	0.054"	✓			
Lower 3.8" of bubble	0.095" Min	0.097"	✓			

Measured by:	<u>W.H.</u>	Audited by:	<u>S.</u>	Prototype Approval:	<u>N/A</u>
Date:	08/11/26	Date:	06/11/26	Date:	

Rev	Date	Change	Revised by	Approved
		New Issue		